

What is claimed is:

1. A method of detecting a prospective abnormal shadow in an image at a predetermined detecting level, wherein the improvement comprises

5 the step of changing the detecting level according to prior information on the object.

2. A method as defined in Claim 1 in which the prior information is at least one of information obtained from meeting with the patient, information obtained from
10 examination by touch and the past history of the patient.

3. A method as defined in Claim 1 in which the detecting level is changed part by part of the image.

4. A method as defined in Claim 1 in which the image of the object is a mammogram.

15 5. A method of detecting a prospective abnormal shadow in an image of an object at a predetermined detecting level, wherein the improvement comprises

the step of changing the detecting level according to photographing conditions under which the image of the object
20 is taken.

6. A method as defined in Claim 5 in which the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating time, the product of the tube current and the irradiating time,
25 the degree of compression of the object when the object is photographed under pressure, whether a grid is used, the kind

of the grid used, and the magnifying power.

7. A method as defined in Claim 5 in which the detecting level is changed part by part of the image.

8. A method as defined in Claim 5 in which the image
5 of the object is a mammogram.

9. A system for detecting a prospective abnormal shadow in an image of an object comprising a prospective abnormal shadow detecting means which detects a prospective abnormal shadow at a predetermined detecting level, wherein the
10 improvement comprises that

there are provided a prior information input means through which prior information on the object is input, and a detecting level changing means which changes the detecting level according to the prior information on the object input
15 through the prior information input means, and

that the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means.

10. A system as defined in Claim 9 in which the prior
20 information is at least one of information obtained from meeting with the patient, information obtained from examination by touch and the past history of the patient.

11. A system as defined in Claim 9 in which the detecting level changing means changes the detecting level part by part
25 and the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level

changed by the detecting level changing means part by part.

12. A system as defined in Claim 9 in which the image of the object is a mammogram.

13. A system for carrying out the method of detecting
5 a prospective abnormal shadow in a radiation image in accordance with the second aspect of the present invention. That is, in accordance with the fourth aspect of the present invention, there is provided a system for detecting a prospective abnormal shadow in an image of an object comprising
10 a prospective abnormal shadow detecting means which detects a prospective abnormal shadow at a predetermined detecting level, wherein the improvement comprises that

there are provided a photographing condition input means through which photographing conditions under which the image
15 of the object is taken is input, and a detecting level changing means which changes the detecting level according to the photographing conditions input through the photographing condition input means, and

that the prospective abnormal shadow detecting means
20 detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means.

14. A system as defined in Claim 13 in which the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating
25 time, the product of the tube current and the irradiating time, the degree of compression of the object when the object is

photographed under pressure, whether a grid is used, the kind of the grid used, and the magnifying power.

15. A system as defined in Claim 13 in which the detecting level changing means changes the detecting level
5 part by part and the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means part by part.

16. A system as defined in Claim 13 in which the image
10 of the object is a mammogram.

17. An apparatus for detecting a prospective abnormal shadow in a radiation image of an object comprising

a photographing condition input means through which photographing conditions under which the radiation image of
15 the object is taken is input, and

a prospective abnormal shadow detecting means which detects a prospective abnormal shadow on the basis of the photographing conditions input through the photographing condition input means and radiation image data representing
20 the radiation image of the object.

18. An apparatus as defined in Claim 17 in which the prospective abnormal shadow detecting means comprises a detection processing condition determining section which determines the detection processing conditions on the basis
25 of the photographing conditions, and a prospective abnormal shadow detecting section which detects a prospective abnormal

shadow through a predetermined detection processing on the basis of the radiation image data and the detection processing conditions determined by the detection processing condition determining section.

5 19. An apparatus as defined in Claim 18 in which the detection processing condition is a threshold value employed in the detection processing.

10 20. An apparatus as defined in Claim 18 in which the detection processing condition is filtering properties of a shape-dependent filter employed in the detection processing.

15 21. An apparatus as defined in Claim 17 in which the prospective abnormal shadow detecting means comprises an image conversion section which carries out predetermined image conversion processing on the radiation image data on the basis of the photographing conditions, and a prospective abnormal shadow detecting section which detects a prospective abnormal shadow through a predetermined detection processing on the basis of the converted radiation image data.

20 22. An apparatus as defined in Claim 21 in which the image conversion processing is frequency enhancement processing.

25 23. An apparatus as defined in Claim 17 in which the photographing conditions is at least one of the kind of the grid employed in photographing, the tube voltage, the filter, the irradiation dose, the pressure on the object and the thickness to which the object is compressed.

24. An apparatus as defined in Claim 17 in which the radiation image is a mammogram.

25. An apparatus as defined in Claim 17 in which the prospective abnormal shadow is a prospective micro
5 calcification shadow.

09387402-114431